

Title (en)
MEMBER WITH INNER TEETH AND METHOD OF PRODUCING THE SAME

Title (de)
ELEMENT MIT INNENZAHN UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)
ELEMENT A DENTS INTERIEURES ET SON PROCEDE DE PRODUCTION

Publication
EP 1813837 A4 20100331 (EN)

Application
EP 05806707 A 20051116

Priority
• JP 2005021060 W 20051116
• JP 2004331556 A 20041116

Abstract (en)
[origin: EP1813837A1] Grooves (4a-4f) as ball rolling grooves are formed in a side peripheral wall of a preparatory formed body (8) that is to be an inner member (1). A recess (6) opened so as to be continuous to curved bottom sections of the grooves (4a-4f), which face a through-hole (2), is formed in one end surface of the preparatory formed body (8). In carburizing, carburizing gas entering into space (16) between the through-hole (2) and a support shaft member (14) flows through the recess (6) after coming into contact with inner teeth (3), and is then discharged to the outside of the preparatory formed body (8) via the curved bottom sections of the grooves (4a-4f). On the contrary, the carburizing gas having been in contact with the inner teeth (3) is then discharged through the space (16).

IPC 8 full level
F16H 55/06 (2006.01); **C23C 8/20** (2006.01); **F16D 3/20** (2006.01); **F16D 3/2245** (2011.01)

CPC (source: EP US)
C23C 8/02 (2013.01 - EP US); **C23C 8/04** (2013.01 - EP US); **C23C 8/22** (2013.01 - EP US); **F16D 3/06** (2013.01 - US); **F16D 3/20** (2013.01 - US); **F16D 3/223** (2013.01 - EP US); **F16D 3/224** (2013.01 - EP US); **F16D 2003/22313** (2013.01 - EP); **F16D 2250/00** (2013.01 - EP US); **F16D 2300/10** (2013.01 - EP US); **Y10S 464/906** (2013.01 - EP)

Citation (search report)
• [YD] JP H09177810 A 19970711 - NTN TOYO BEARING CO LTD
• [YD] JP H09324257 A 19971216 - HONDA MOTOR CO LTD
• [AD] US 2003051771 A1 20030320 - NISHIMORI HIROSHI [JP], et al
• [AD] JP H05215144 A 19930824 - NTN TOYO BEARING CO LTD
• [AD] JP 2003193138 A 20030709 - TOYOTA MOTOR CORP
• See references of WO 2006054614A1

Cited by
CN113293346A; US8403764B2; US8499457B2; TWI831092B

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 1813837 A1 20070801; **EP 1813837 A4 20100331**; CN 100460719 C 20090211; CN 101023285 A 20070822; JP 2006144814 A 20060608; JP 4516411 B2 20100804; MY 141262 A 20100416; US 2008090665 A1 20080417; US 7641564 B2 20100105; WO 2006054614 A1 20060526

DOCDB simple family (application)
EP 05806707 A 20051116; CN 200580031849 A 20051116; JP 2004331556 A 20041116; JP 2005021060 W 20051116; MY PI20055346 A 20051115; US 66374205 A 20051116